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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------------|------------------|
| 10/657,224 | 09/09/2003 | Yoshihiro Ogawa | 03500.017544 | 8834 |
| 5514 | 7590 | 06/14/2005 | | |
| FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112 | | | EXAMINER WEBB, CHRISTOPHER G | |
| | | | ART UNIT 2878 | PAPER NUMBER |

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/657,224 | OGAWA ET AL. | |
| | Examiner | Art Unit | |
| | Christopher G. Webb | 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20031015</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Umemoto et al. (US 5,477,053, hereafter Umemoto).

With respect to claim 1, Umemoto discloses a radiation converting substrate constituted by forming a phosphor layer for converting radiation into light (fig. 1, fluorescent layer 1) and a moisture-preventing protective layer covering said phosphor layer, in succession on a substrate (fig. 1, support) capable of transmitting the radiation (col. 3, lines 48-54): wherein said moisture-preventing layer comprises a first plasma polymerization film (fig. 1, water repellant layer 2) formed from a monomer of a silane compound (col. 5, line 17), and a second plasma polymerization film (fig. 1, protective layer 3) formed from a monomer of a fluorine-containing unsaturated hydrocarbon (col. 5, lines 40-42).

As to claim 2, Umemoto discloses that the first plasma polymerization film and the second plasma polymerization film are laminated in succession on said phosphor layer (col. 3, lines 23-27).

As to claim 3, Umemoto discloses that the fluorine-containing unsaturated hydrocarbon includes 2 to 5 carbon atoms (col. 5, lines 40-42).

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As to claim 4, Umemoto discloses that the phosphor layer is constituted of an alkali halide and a light emission activator (col. 4, lines 10-19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umemoto as applied to claim 1 above, and further in view of Honda et al. (US 2003/0025084 A1, hereafter Honda).

With respect to claim 5, Umemoto does not disclose that the substrate of claim 1 is adhered to a sensor substrate including a photoelectric converting element. Honda teaches a radiation image detector with a layer capable of conducting photoelectric conversion (paragraph [0012], lines 6-8). It would have been obvious at the time of invention to one of ordinary skill in the art to use the photoelectric converting layer of Honda with the substrate taught by Umemoto. The use of electronic reading means for radiation storage panels is well known in the art, and the inclusion of a photoelectric converting layer in the substrate would allow for digital processing of the data stored on the panel. Additionally, methods of erasing a radiation storage panel are well known and the digital storage of the data from a radiation storage panel would permit a re-use of said panel.

As to claim 6, Umemoto discloses a radiation converting substrate constituted by forming a phosphor layer for converting radiation into light (fig. 1, fluorescent layer 1) and a moisture-preventing protective layer covering said phosphor layer directly in succession on a substrate (fig. 1, support): wherein said moisture-preventing layer comprises a first plasma polymerization film (fig. 1, water repellant layer 2) formed from a monomer of a silane compound (col. 5, line 17), and a second plasma polymerization film (fig. 1, protective layer 3) formed from a monomer of a fluorine-containing unsaturated hydrocarbon (col. 5, lines 40-42). Umemoto does not disclose that the substrate is adhered to a sensor substrate including a photoelectric converting element. Honda teaches a radiation image detector with a layer capable of conducting photoelectric conversion (paragraph [0012], lines 6-8). It would have been obvious at the time of invention to one of ordinary skill in the art to use the photoelectric converting layer of Honda with the substrate taught by Umemoto as noted above with respect to claim 5.

As to claim 7, Umemoto discloses that the first plasma polymerization film and the second plasma polymerization film are laminated in succession on said phosphor layer (col. 3, lines 23-27).

As to claim 8, Umemoto discloses that the fluorine-containing unsaturated hydrocarbon includes 2 to 5 carbon atoms (col. 5, lines 40-42).

As to claim 9, Umemoto discloses that the phosphor layer is constituted of an alkali halide and a light emission activator (col. 4, lines 10-19).

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As to claim 10, Umemoto in view of Honda discloses a system comprising a radiation pickup apparatus according to claim 6. Umemoto does not disclose the rest of the system described in claim 10. Honda teaches a signal processing means (fig. 1, element 51) which processes a signal (fig. 1, DFE) from a radiation image pickup apparatus (fig. 1, element 20); a recording means (fig. 1, element 55) which records a signal from said signal processing means; a display means (fig. 1, element 52) which displays a signal from said signal processing means; and a radiation source (fig. 1, element 10) for generating said radiation. It would have been obvious at the time of invention to one of ordinary skill in the art to include the elements taught by Honda in the system of Umemoto. By including said elements, a system is created which needs no additional elements to be used on a subject in, for example, a doctor's laboratory. It is often desirable to have a complete system as opposed to one piece of it, and similar radiation imaging systems are well known in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,324,609 and *New Fluorine-Containing Monomer*, by Dr. Koji Kato both disclose prior art relevant to the consideration of the applicant's disclosure.

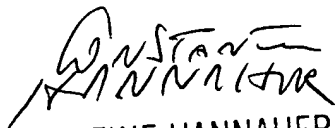
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Webb whose telephone number is (571) 272-8449. The examiner can normally be reached on 9AM - 5:30PM M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CGW


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878